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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,359	03/16/2001	Taeyoung Yoon	49662 [72021]	7721
21874	7590	01/04/2005	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			TRUONG, TAMTHOM NGO	
			ART UNIT	PAPER NUMBER
			1624	

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/811,359	Applicant(s) YOON ET AL.	
	Examiner Tamthom N. Truong	Art Unit 1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 24-27, 30 and 35 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-16 is/are allowed.
- 6) ☒ Claim(s) 1-6, 24-27, 30 and 35 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's amendment of 09-10-04 has been fully considered. The argument and amended claims have overcome the previous rejection of 102, but not the rejection of 112/2nd paragraph on "*optionally substituted*". Thus, the previous 112/2nd rejection is maintained herein. In addition, an update search yields the following double patenting rejection.

Claims 17-22, 39-64, and 67 are withdrawn.

Claims 23, 28, 29, 31-34, 36-38, 65, 66, and 68 are cancelled.

Claims 1-16, 24-27, 30, and 35 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1, 2, 4, 24-27, 30 and 35 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejection is maintained for the reason stated in the previous office action, and for the one below:

Applicant contends that the term "*optionally substituted*" is well understood by those of ordinary skill in the art "to mean that one or more hydrogen residues of a specified group have been replaced with a non-hydrogen residue." It maybe true that one knows what "*optionally substituted*" means, but applicant has failed to set forth the intended non-hydrogen residues

Art Unit: 1624

which are intended to represent subject matter applicant regards as their invention. Considering the *pyrimidinyl* core is quite simple, and if the substituents R₁-R₃ are "*optionally substituted*", the final structure of the claimed compound would be very vague since the terminal groups on R₁-R₃ are indeterminate.

Double Patenting

The **nonstatutory double patenting** rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 2, 3, 5, 6, 24, 27, and 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 3, 8, 10, 11, 22-26, 29-32, 34, and 46 of U.S. Application No. 10/154,482 (**recently allowed**). Although the conflicting claims are not identical, they are not patentably distinct from each other because the 2,5-diarylpyrimidinyl compounds of the allowed application fall within the instantly claimed pyrimidine formula with the following substituents:

- a. Ar is phenyl or naphthyl;

- b. R_2 is an optionally substituted aryl (corresponds to Ar_1 of the allowed application);
- c. R_1 has somewhat the same scope as R_1 of the allowed application;
- d. R_3 has somewhat the same scope as R_2 of the allowed application.

The instant claims differ from those of the allowed application in that N-oxide is not intended, and R_2 is not a heterocycle. However, within the subgenus cited above, it would have been obvious to one skilled in the art to select and make the compounds of the allowed application.

Claim Objections

3. Claims 7, 8 are objected to as being dependent upon a rejected base claim, but they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 7 and 8 depend on claim 3; however, they do not recite compounds that falls within the genus of the copending application 10/154,482 (or **Huang et. al.** US 2003/0119844 A1).

Allowable Subject Matter

4. Claims 9-16 currently are free of prior arts, and therefore, are allowable. Said claims recite compounds of formula A which has the pyrimidine-Ar ring substituted with $-NR_xR_y$, and compounds of the formula having the pyrimidine-Ar ring substituted with $-OR_x$. The prior arts of record do not teach 2-Ar-pyrimidine compounds having a substituent equivalent to $-NR_xR_y$, or

Art Unit: 1624

-OR_x. Note, the proviso in claims 9 and 15 further requires that the claimed compounds must be substituted either at the 4th or 6th position, which exclude compounds known in the art.

An update search yields a reference of **Huang et. al.** which discloses an intermediate (201) – a hydroxy-pyrimidine-Ar₂, which is related to compounds recited in claim 15. However, the compounds in claim 15 are not substituted with hydroxy since R_x in the group of -OR_x is never hydrogen. Thus, said reference only shows state of the art.

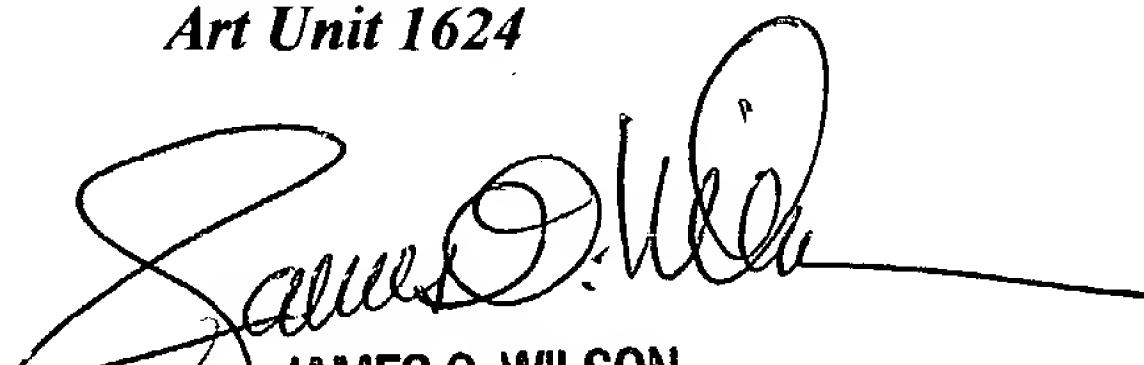
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamthom N. Truong whose telephone number is 571-272-0676. The examiner can normally be reached on M-F (10:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11-22-04


Tamthom N. Truong
Examiner
Art Unit 1624


JAMES O. WILSON
SUPERVISORY PATENT EXAMINER
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